

Section 4

Planning and Project Management

Overview of Planning and Project Management Requirements

Information is a critical resource in government and many private sector activities. Virtually every government agency and many businesses spend substantial time and resources collecting, distributing, analyzing, transforming, and using information. In the past, manual procedures provided the only means for manipulating information. Today, automation and information technology represent powerful tools for maximizing the value of information. As a major resource and asset, information technology requires effective planning and management. In this respect, information technology has much in common with other types of assets, such as human resources, capital facilities, and financial resources. All require some degree of formal structure to promote effective use and management.

The NITC vision statement speaks to using information technology "to improve the quality of life of all Nebraskans." This vision, the NITC goals, and priorities of the NITC Councils provide the context for the planning process. In addition, good planning and management should help to achieve certain principles for information technology. These include:

- Information technology must serve and respond to the mission, goals, and priorities of the sponsoring entity.
- Assessing and possibly redesigning the business process must precede decisions about applying a specific information technology solution.
- The planning and management process should treat information as a strategic resource that has value and should explore ways to maximize this value.
- Information belongs to the enterprise, and sponsoring entities should incorporate data sharing and the needs of other users in their plans, subject to privacy and confidentiality requirements.
- Information technology systems should be scalable, reliable, and efficient.

Section 86-1506 (5) directs the NITC to adopt guidelines regarding project planning and management. Section 86-1510 (5) requires the Chief Information Officer to "implement a strategic, tactical, and project planning process for non-education state government information technology that is linked to the budget process." Section 86-1510 (9) requires the Chief Information Officer to "monitor the status of major non-education state government technology projects." These planning and project management requirements apply to any "governmental entities, state agencies, and political subdivisions which directly utilize state-appropriated funds for information technology purposes."

Section 86-1511 requires the Technical Panel to "review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission." Section 86-1506 (8) requires the NITC to "... make recommendations to the Governor and Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested."

This section of the Statewide Technology Plan presents procedures for the following activities:

- Agency Comprehensive Information Technology Plan
- Information Technology Budget Requests
- Information Technology Project Proposals
- Technical Review Process
- NITC Recommendations and Prioritization
- Information Technology Project Management and Implementation

Agency Comprehensive Information Technology Plans

Comprehensive information technology plans should document how an organization's use of information technology supports its goals, objectives and functions. The plans provide a baseline view of current systems and provide strategic direction for future investments in information technology. The level of detail should be sufficient to assist high-level decisions, but does not substitute for specific project plans used for budgeting. As public documents, comprehensive technology plans serve as a means for communicating with other agencies and organizations that may be affected.

The comprehensive technology plans serve the following purposes:

- Assist decision-making at the organizational and statewide levels;
- Create a structured planning process for information technology;
- Integrate agency information technology planning with the state's biennial budget process;
- Catalog the state's information technology assets;
- Provide a clearinghouse of plans to encourage sharing of best planning practices; and
- Promote compatibility between an organization's strategic direction for information technology and the NITC's Statewide Technology Plan.

Required

All state agencies and public higher education institutions requesting state appropriations for information technology should prepare a comprehensive information technology plan.

Recommended

Political subdivisions and major public service organizations should prepare a comprehensive technology plan to guide internal decisions and to encourage collaboration with other organizations.

Procedures for Submission

Agency Comprehensive Information Technology Plans are due by February 1 of even-numbered years.

The Comprehensive Information Technology Plan form is available on the NITC Web site (<http://www.nitc.state.ne.us/forms/>). Any agency which does not have Internet access can obtain copies of the form by contacting the Office of the CIO at:

Office of the CIO
521 South 14th Street, Suite 200
Lincoln, Nebraska 68508
(402) 471-3560

The plan should be submitted in one of the following ways:

- The preferred method for submitting the plan is through the use of the submitting agency's Web site. If possible, the submitting agency should post their Comprehensive Information Technology Plan to their agency's Web site. The agency should then provide the Office of the CIO with the URL which corresponds to the plan by sending an e-mail with the relevant information to info@cio.state.ne.us.
- The plan may also be submitted as an e-mail attachment to info@cio.state.ne.us. The e-mail message should include the name of the submitting agency and contact information for the individual submitting the documents.
- Completed forms may also be provided to the Office of the CIO on a standard 3.5" diskette or CD-ROM.
- If an agency is unable to submit files in any of the methods above, contact the Office of the CIO to make other arrangements.

Review of Plans

NITC staff will review the technology plans of state agencies and public higher education institutions for completeness and to prepare summaries for the NITC and its councils. The Technical Panel may review comprehensive technology plans on a selective basis. NITC staff will forward any comments to the submitting agency or institution.

Relationship to the Budget Request

The comprehensive technology plan provides part of the context for evaluating an agency's budget request for information technology. The comprehensive information technology plan is not subject to NITC approval, although staff and the Technical Panel will review the plans and offer comments and suggestions.

Agency Information Technology Budget Requests

State agencies must submit information relating to expenditures and funding requests relating to information technology as part of the biennial budget request cycle and interim budget requests. Specific directions are included with the State of Nebraska Budget Instructions. Major aspects of the budget request for information technology include:

- Personnel who provide or support information technology
- On-going operational costs
- One-time project costs
- Narrative justification, including life-cycle costs and performance indicators

The budget request document will no longer include narrative information that belongs in the agency's comprehensive information technology plan or project plans. Instead, the budget request will focus on linking information technology costs to different programs and other categories. Performance indicators will enable policy makers to establish a better understanding of the value of technology to each agency's mission and goals.

Required

All state agencies and public higher education institutions requesting state appropriations for information technology must submit budget request data for information technology expenditures as part of the state's budget request process.

Recommended

Political subdivisions and major public service organizations should adopt budget procedures for information technology that serve the needs of their respective governing entities.

Procedures for Submission

The State Budget Division will provide an automated system for preparing information technology budget requests. NITC staff

will prepare summaries of information technology expenditures and requests for the NITC and the NITC Councils. NITC staff will assist the State Budget Division and Legislative Fiscal Office with reviewing information technology expenditures and requests.

Agency Information Technology Project Proposals

Project proposals provide detailed information about the purpose, scope, justification, and implementation of new projects and major changes to existing systems. Agencies should prepare a project proposal for all projects requiring new or additional funding. The degree of detail in each plan should correspond to the magnitude of the project. Major components of each project proposal are listed below:

- General Information
- Executive Summary
- Goals and Objectives
- Scope and Projected Outcomes
- Project Justification / Business Case
- Implementation
- Technical Impact
- Risk Assessment
- Financial Analysis and Budget

Required

All state agencies and public higher education institutions requesting state appropriations for information technology must prepare a project proposal for each information technology project. An information technology project is defined as a specific series of activities involving the implementation of new or enhanced IT systems for the sponsoring agency. A project proposal is required whenever new or additional state appropriations (regardless of fund type) are required for implementation. Project proposals should also be prepared for requests for funding from the Community Technology Fund, the Government Technology Collaboration Fund, Education Technology Assistance Grants, and the School Technology Fund.

Procedures for Submission

State agencies and public higher education institutions must submit their information technology project proposals to the NITC at the same time that biennial budget request documents are due.

The Project Proposal Form and Assessment Document can be found on the NITC Web site (<http://www.nitc.state.ne.us/forms/>). Any agency which does not have Internet access can obtain copies of the templates and forms by contacting the Office of the CIO at:

Office of the CIO
521 South 14th Street, Suite 200
Lincoln, Nebraska 68508
(402) 471-3560

Project proposal forms should be submitted in one of the following ways:

- The preferred method for submitting the project proposal forms is through the use of the submitting agency's Web site. If possible, the submitting agency should post their project proposal forms to their agency's Web site. The agency should then provide the Office of the CIO with the URL which corresponds to the forms by sending an e-mail with the relevant information to info@cio.state.ne.us.
- The forms may also be submitted as an e-mail attachment to info@cio.state.ne.us. The e-mail message should include the name of the submitting agency and contact information for the individual submitting the documents.
- Completed forms may also be provided to the Office of the CIO on a standard 3.5" diskette or CD-ROM.
- If an agency is unable to submit files in any of the methods above, contact the Office of the CIO to make other arrangements.

Review of Project Proposal Forms

NITC staff will review project proposals for completeness and to prepare summaries for the NITC, the Technical Panel, and the NITC councils. NITC staff will assist the NITC and its councils with the review and prioritization process set forth below. NITC staff will forward any comments to the sponsoring agency or institution.

The NITC Technical Panel will conduct a formal review of projects that fall into one or more of the following categories:

- New or additional state funding (appropriation request)

- Community Technology Fund and Government Technology Collaboration Fund
- Education Technology Assistance Grants or School Technology Fund
- Special requests by the sponsoring agency, governing board, the Governor, Legislature, or the NITC

Technical Review Process

Section 86-1511 (2) requires the Technical Panel to "... review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission...." Sections 86-1512 and 86-1513 require the Technical Panel to review requests for funds from the Community Technology Fund and the Government Technology Collaboration Fund. Section 9-812 requires the Technical Panel to review funding requests for educational technology assistance grants (lottery funds). In addition, the Technical Panel will conduct special reviews on request by project sponsors, the Governor, the Legislature, or other entities exercising oversight responsibilities.

The review process will evaluate and rank the adequacy of each component of the project plan. The Technical Panel will identify issues pertaining to implementation, technical impact, and risk assessment. The Technical Panel will look for duplication, opportunities for collaboration and compatibility with other systems.

It is neither practical nor necessary for the Technical Panel to review all information technology projects that an agency or other jurisdiction undertakes. One purpose of the review process is to assist the budget process in reviewing and ranking appropriation requests. Statute requires the Technical Panel to review requests for "additional funding." Given the undefined meaning of this term, the NITC and Technical Panel will rely on the State Budget Division and Legislative Fiscal Office for assistance in determining what information technology projects represent "additional funding."

Another purpose of the review process is to promote consistency with the Statewide Technology Plan. Other than reviews mandated by statute, the NITC and Technical Panel must rely on agencies and other jurisdictions to identify and submit for review any projects that would have either a significant positive or negative impact on the Statewide Technology Plan.

The review process can also provide technical assistance and advice to project sponsors. Agencies and other jurisdictions may submit any project to the Technical Panel for review.

NITC Recommendations and Prioritization

Section 86-1506 requires the NITC to "... make recommendations to the Governor and Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested." The NITC will use a three-step process in evaluating information technology projects and assigning each a unique priority ranking. The process will rely on information provided in the agency information technology project proposals described above.

Technical Panel review and recommendations

Using an assessment tool, the Technical Panel will score the technical aspects of the project proposals, including the sections on implementation, technical impact, financial analysis, and risk assessment. Although the Technical Panel must have information about all aspects of a proposed project, the panel's review will focus on questions impacting the potential success of the project rather than its programmatic merit or justification.

Council reviews and recommendations

The NITC councils will evaluate the objectives and justification for each project. Based on these evaluations and the technical assessment, each council will prepare a prioritized list of recommended projects for its sector.

NITC prioritization

The NITC will prepare a combined list of prioritized projects.

The assessment document used to score project proposals can be found on the NITC Web site (<http://www.nitc.state.ne.us/forms/>).

Project Management Guidelines

Overview

Section 86-1506 (5) directs the NITC to adopt guidelines regarding project planning and management. The goal of project management is to achieve the objectives of the project on time and within budget. Project management should define the responsibilities of project sponsors, and provide for adequate monitoring and reporting to the appropriate managers of the sponsoring entity and policy makers. It should allow a means to document benefits, monitor the scope and completion of projects, and compare costs.

The size and complexity of a project will determine the approach and structure required for good project management. Small projects may require only informal procedures. Large projects may require professional project managers and a formalized project management methodology.

Project management is essential for projects that present unusual or high risks. These risks may include:

- Technical (such as new technologies to the state or the sponsoring entity),
- Work processes (such as new functions or different ways of performing functions),
- Organizational (such as dealing with multiple organizational entities),
- Legal, contractual, regulatory, or
- Other (such as system size, funding limitations, project duration, timetable flexibility, technical or business complexity, implementation challenges, importance to the operation of the organization, or interrelations with other systems).

The NITC intends to develop standards and guidelines regarding project planning and management that are supported by the Project Management Institute (PMI) through the Project Management Body of Knowledge (PMBOK). PMI is the leading nonprofit professional association in the area of project management. PMI establishes project management standards and

provides seminars, educational programs and professional certification to the project management profession. The PMBOK is an inclusive term that describes the sum of knowledge within the profession of project management.

The PMBOK describes a project as a temporary endeavor undertaken to create a unique product or service. Types of information technology projects may include feasibility studies, research efforts, information technology strategic or other planning initiatives, system implementation, or development projects.

These general procedures for project management and implementation include three components:

- Project charter (to summarize expectations and responsibilities)
- Project implementation plan (to provide the detailed analyses that guide the project from beginning to conclusion)
- Project tracking and reporting (to communicate the progress of the project compared to expectations)

Applicability

All state agencies and public higher education institutions using state appropriations for information technology should adopt project management and implementation procedures, such as those presented in this guideline. All political subdivisions and major public service organizations should adopt similar policies to guide project management and implementation.

State-funded entities should follow these or similar project management guidelines for major projects and projects that have statewide strategic importance.

A "major project" includes projects that would have a significant effect on a core business function of the sponsoring organization. In addition, any project that would incur total cumulative expenditures of \$250,000 or more should be considered a major project.

A "statewide strategic project" affects multiple government programs or departments. These projects may involve interfaces with other applications, provide data to or receive information

from other applications or government programs or organizations. Statewide strategic projects may impact state and local governments, private industry, citizens, or state employees beyond the sponsoring agency within a department or beyond the responsible department. Statewide strategic projects impact the state and its citizens from an enterprise perspective that is broader than the sponsoring organization.

Instructions

Project Charter

The project charter is the primary document that sets expectations for the project among the stakeholders. The responsible manager within the sponsoring entity should commit to the completion of the project within the parameters of the project charter. The charter will set forth the project scope, schedule, budget, and benefits. The project charter also:

- Identifies the project sponsor, project manager, and responsibility for project success;
- Sets baselines to assess progress;
- Documents assumptions which must hold true for the project to satisfy expectations; and
- Provides a means to modify project expectations and deliverables, if changes occur.

The contents of the project charter should include:

- **Project Description.** Include a brief description of the purpose of the project in non-technical terms.
- **Project Scope and Objectives.** Include one or two paragraphs defining the project scope and objectives in terms of the specific business functions the project will support. Refer to an expanded definition of project scope in the supporting material, if necessary.
- **Schedule.** Set deadlines for project deliverables. Define when the project starts and the projected completion date. Document major milestones that should be finished at certain dates.
- **Staffing.** Identify what skill sets are required on the project and who is responsible for specific activities.

- **Total Development Cost.** Include the current total development cost estimate for the project from the initial project plan or as revised in the project implementation plan. Include a summary of staffing requirements and costs.
- **Total Net Cash Flow.** Provide the cash flow of the project for the entire life cycle.
- **Funding Source.** Document the source of funds and indicate any contingencies.
- **Summary of Benefits.** Include a brief list of tangible and intangible benefits for the project. Refer to an expanded presentation of project benefits in the supporting material, if necessary.
- **Risks.** Identify major risks associated with the project and what action is anticipated to mitigate them.
- **Responsibilities.** Document the responsibilities and authority of the major participants, including the sponsor(s), project manager, and other persons who control different variables that affect the success of the project.
- **Signature Blocks for Approval.** Signatories are the agency head or appropriate manager within the sponsoring entity, project manager, and other stakeholders, if multiple units of government are involved.

Project Implementation Plan

Each project manager should develop, maintain, and follow a written plan that defines project goals, processes, and resource estimates (in terms of schedule, cost, and development). The implementation plan must be updated throughout the life of the project to accurately reflect the current plan. The implementation plan should review and update the original information technology project proposal that served as a decision document for funding. The implementation plan serves as supporting documentation for the project charter.

The project implementation plan should summarize the results of any detailed development planning, including the requirements definition, the general design, and feasibility study.

The project implementation plan should include a well-defined problem statement with well-defined business and technical requirements that assure the information technology solution satisfies the business need. Requirements must be thoroughly

documented and understood by the project team. Changes to requirements must be managed throughout the life of the project.

Risks associated with each information technology project should be identified, analyzed, and prioritized. Identified risks should be controlled through the processes of project planning and monitoring. Risk identification and management must be integrated components of project management and risks must be continuously assessed and analyzed during the life of the project.

Project Tracking and Reporting

Project managers should continuously track the progress of all projects against the project implementation plan. Project tracking involves monitoring and reviewing the project accomplishments and results against documented estimates contained in the implementation plan, and adjusting these estimates based on the actual accomplishments and results. Project tracking and reporting should serve the needs of:

- Project management
- Project sponsors
- Agency directors
- Policy makers

Close attention to basic control principles will improve the success of projects. Achieving this requires a disciplined approach to tracking project status, anticipating potential problems that may arise, and quick attention to resolve any problems. Project tracking and reporting should include the following minimum components, with a comparison between estimated and actual status for that time period.

- Changes to project sponsorship, management, or organization
- Project schedule and milestones (including changes to scheduled dates for key deliverables or milestones and planned completion date)
- Project budget (including cash flow and funding sources)
- Project scope, objectives, or requirements (if any changes occur)
- Summary of accomplishments since the last reporting period
- Summary of past, current and future issues (including steps to mitigate actual or potential problems and an updated risk analysis)

Planning and Project Management

Project tracking methods and requirements will vary by project, based on the size, cost, complexity, and impact on the affected organizations. The management of a project includes processes for tracking and communicating project status and performing risk assessments. The formality of this tracking process may change, based on the specific project. The project manager has responsibility for tailoring all elements to meet the specific needs of the project. These same factors will affect the frequency of reporting, whether monthly, quarterly or less frequently. All projects should have a final report that summarizes final costs, issues, and lessons learned.

Summary of Planning Components and Applicability

Information Technology Planning Components	Description	Purpose	Primary Users	Timeline	Applicability			
					State Agencies	NITC Grants	Other Entities	
Comprehensive IT Plan								
Comprehensive IT Plan	Agency level overview and strategic direction for the future	1) Guide internal agency planning process 2) Provide context for reviewing projects 3) Identify opportunities for collaboration 4) Identify enterprise-wide issues	1) Agencies 2) CIO 3) Tech. Panel	2/1/2002	Required	NA	Recommended	
Biennial Budget Process								
Budget Request	Biennial budget request for information technology expenditures	1) Assist agency management of major resource 2) Document expenditures on information technology 3) Identify enterprise-wide issues	1) Agencies 2) Budget Off. 3) NITC/CIO 4) Policy makers	9/16/2002	Required	NA	NA	
Project Proposals	Detailed explanation of objectives, scope and justification of specific projects for which new or additional funding is requested	1) Guide internal agency planning process 2) Document scope and benefits of project for policy makers 3) Provide basis for review and prioritization by NITC	1) Agencies 2) NITC 3) CIO 4) Policy makers	9/16/2002	Required for new and additional funding only	Required	Recommended	
Technical Review	Review projects for technical soundness and consistency with Statewide Technology Plan	1) Evaluate technical soundness of projects 2) Determine whether projects are consistent with state plan	1) Agencies 2) NITC 3) CIO 4) Policy makers	10/15/2002	Required for new and additional funding only	Required	Optional *	
Project Prioritization	Evaluation and prioritization of project proposals by the NITC and its Councils	1) Prioritize projects 2) NITC forwards prioritized list of projects to Governor and Legislature	1) NITC 2) CIO 3) Policy Makers	11/15/2002	Required for new and additional funding only	Required - NITC Awards Grants	NA	
Project Management and Implementation								
Project Management and Implementation	Guidelines for project management, implementation, status reporting and monitoring.	1) Guide agency management of projects 2) Promote successful implementation 3) Document project status	1) Agencies 2) CIO 3) Policy makers	On-going	Recommended for all IT projects, including those which did not require new or additional funding	Recommended	Recommended	

Technical reviews are optional for all other entities, except for projects receiving funds from the Education Innovation Fund and School Technology Fund. State Statute requires these projects to be reviewed by the Technical Panel of the NITC.

Planning and Project Management